DOCUMENT RESUME

ED 313 109 PS 018 311

AUTHOR Blois, George T.; Cushing, Katherine S.
TITLE Developmental Kindergarten Program Evaluation Report.
INSTITUTION Harrison School District No. 2, Colorado Springs, CO.
PUB DATE Jul 89
NOTE 51p.
PUB TYPE Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Administrator Attitudes; *Developmental Programs; Interviews; *Kindergarten; Pretests Posttests; Primary Education; Program Descriptions; Program Effectiveness; Program Evaluation; School Districts; *Standards; *Student Improvement; *Teacher Attitudes
IDENTIFIERS Colorado (Colorado Springs); Developmentally Appropriate Programs; *Program Characteristics

ABSTRACT

The evaluation of the Developmental Kindergarten (DK) Program at the Harrison School District #2, Colorado Springs, Colorado, involved pre- and post-testing of student academic gains and interviewing of principals and teachers. The program aimed to provide developmentally appropriate activities for students believed to be "at risk" of failure in a regular kindergarten program. A total of 36 students participated. Testing indicated that participants made gains on all three student measures employed. Principals believed that the DK program: (1) differed from the regular program; (2) had certain advantages; (3) had a positive impact in their buildings; and (4) helped students avoid learning and behavior problems while promoting their academic and social growth. Principals recognized the difficulties of starting such a program and indicated the lack of a guiding district philosophy. Teachers: (1) found differences and similarities among DK programs in different buildings; (2) believed that the DK program delivered many positive outcomes for students; (3) identified major concerns with the program; (4) differed in their expectations for the program's coming year; and (5) perceived the DK program as a means of developing alternative instructional strategies and sorting low-end students. Program emphases and comprehensive, exact specifications of standards for each area of emphasis are listed in appendices, which make up the bulk of the document. (RH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED313109

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Harrison School District #2
1060 Harrison Road
Colorado Springs, Colorado 80906
719-576-8360

DEVELOPMENTAL KINDERGARTEN PROGRAM EVALUATION REPORT

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
George T. Blois
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

George T. Blois
Katherine S. Cushing

FS 018311

BEST COPY AVAILABLE

GENERAL OVERVIEW

Schools Participating

Bricker
Pikes Peak
Monterey
Stratton Meadows

Purpose

To provide developmentally appropriate activities for students believed to be "at risk" for experiencing success in a regular kindergarten program.

Student Selection Criteria

- low Brigance scores
- limited understanding and use of language
- no pre-school learning experience
- difficulty learning

Participants

- 36 students (22 male, 14 female)

- 2 Asian, 9 Black, 10 Hispanic, 15 Other

- Average age at the start of school was 5 years, 4 months (22 of the 36 were 5 years, 4 months or younger at the start of school)

Evaluation

Pre- and Post- Testing: students in the program gained an average of:

- 29 points on the Brigance. This was 3 points higher than the control group (students who were not in the developmental kindergarten program who matched up with developmental kindergarten students on the basis of sex, ethnicity, and scores on the Brigance pre-test).

- 8.1 points on the Peabody

- 6.6 points on the TOLD

Interviews

Findings - Principals:

- Principals believe the developmental kindergarten program was different than the regular kindergarten program and that there were certain advantages associated with the developmental kindergarten program.

- Principals believe the developmental kindergarten program had a positive impact in their buildings.

- Principals recognize the difficulties of starting something new and the lack of a district philosophy of what this program should look like.

- Principals believe the developmental kindergarten program helped avoid learning and behavior problems and resulted in both academic and social growth for the students.

Findings - Teachers:

- Although the developmental kindergarten programs looked somewhat different depending upon the building in which it was housed, there were also important similarities among the programs.

- Teachers believe there were many positive outcomes for students in the developmental kindergarten program.

- Teachers identified major concerns with the program including organizational and communication problems and lack of centralized leadership.

- Teachers have different expectations about what will happen to these kids next year.

- Teachers perceived the developmental kindergarten program as a means for both developing alternative instructional strategies and as a means of sorting low-end kids.

Recommendations:

- Continue with the program.

- Communicate the already established "Descriptors of a Developmental Kindergarten Program" to principals and teachers (see Appendix D).

- Identify a coordinator to establish a system for planning and evaluation and to provide guidance.

- Continue collecting data to identify program success.

- Provide opportunities for staff in the developmental kindergarten program to meet on a regular basis for curriculum planning and sharing of ideas.

For more information, refer to the Developmental Kindergarten Program Evaluation report.

Developmental Kindergarten Program
Evaluation Report

Program Description

During the 1989-90 school year Harrison School District piloted a Developmental Kindergarten program in four elementary buildings. The four buildings which housed the program included Bricker, Pikes Peak, Monterey, and Stratton Meadows. The program was funded with both district and special education monies. The intent of the program was to provide developmentally appropriate activities for students believed to be "at risk" for experiencing success in a regular kindergarten program (see Newsweek article, Appendix A). Because it was a pilot program, with no articulated curriculum, each building designed the program based upon a building/principal/teacher philosophy and identified eligible students according to individual building criteria. Interestingly, in all four schools staff identified similar students as appropriate for developmental kindergarten: students with low Brigance pretest scores, students who demonstrated limited understanding and use of language, and students who lacked a preschool learning experience and appeared to not learn incidentally from their environment. However, building programs were organized differently. In some schools the developmental kindergarten program served only those students identified as appropriate for the program. In other schools the program was designed to provide good role models of developmentally able children by assigning both identified and non-identified students to the program. In one building the identified student population was so transient (a characteristic of families of at risk students) that only one student who began the program in September was still enrolled at the end of the school year. Over the course of the school year this program accepted four students from other buildings who were identified as having special education needs. The similar characteristics of all four district developmental kindergarten programs were the small number of students assigned to the classroom and the assignment of two adults (either two teachers or a teacher and an aide) to the program.

Developmental Kindergarten Program Participants

Approximately 36 children in the district received kindergarten instruction through the developmental kindergarten program. Of these students, 22 were male and 14 were female. The ethnic distribution was: Asian - 2, Black - 9, Hispanic - 10 and Other - 15. The average age at the start of school was 5 years, 4 months.

Program Evaluation

The evaluation design for the developmental kindergarten program included four major components: (1) immediate measures of pre-post test gains on an assessment of academic readiness skills and on a language assessment battery, (2) longitudinal data, (3) comparisons with a matched control group, and (4) interview data regarding program delivery and effectiveness from principals and teachers involved with the program.

Program Evaluation (cont.)

Measures of immediate gain, an average of 29 points on the Brigance, 8.1 on the Peabody and 6.6 on the TOLD, suggest all students benefited from the program.

Another evaluation component involves the collection and analysis of longitudinal data. One of the initial premises upon which the program was based is the anticipated long-term benefits to be derived from providing early intervention services to youngsters. As such, longitudinal data becomes the most important criteria in identifying program success. Longitudinal data of the following nature will be collected over the next several years to assist in determining the effectiveness of this program:

Standardized Achievement Test Scores

Criterion Referenced Test Scores

School Attendance Rates

Number of Referrals for Special Education Services

Number of Drop-outs

Further, because some kind of comparison with similar students who did not receive developmental kindergarten would enhance the believability that it was developmental kindergarten that "made the difference" in the lives of these children a control group was identified. Students in developmental kindergarten were matched with students in other buildings who were not in developmental kindergarten on the basis of sex, ethnicity, and scores on the Brigance pre-test. Although it was not possible to find a match in every case, approximately 40% of the students in the developmental kindergarten program were able to be matched for comparison purposes. Each child in the developmental kindergarten program and in the matched control group was post-tested on the Brigance Diagnostic Inventory of Early Development, the only common pre- and post-test assessment (see Appendix B). These children will be tested on the Peabody Picture Vocabulary Test (PPVT; a measure of receptive vocabulary) and the Test of Language Development Revised (TOLD-R; a measure of receptive and expressive language) each spring for the next several years to document growth and provide additional data for comparison and evaluation purposes.

In order to determine the perceived usefulness and effectiveness of the developmental kindergarten program, qualitative data was collected in the form of interviews of all four building principals and of the classroom teachers. In many ways interview data is more difficult to analyze the "numbers" because it requires careful and repeated reading of the typed interview protocols. The reader is looking for themes or patterns in interviewee responses, and for examples which clarify the meaning of those themes. Further, believability of the interpretation requires that two or more people <u>independently</u> analyze the data. If multiple readers come to the same conclusions and identify the same exemplars the findings are more believable.

Findings From Principal Interviews

Principals were asked eight questions regarding their perceptions of the developmental kindergarten program (see Appendix C for the list of interview questions). Based upon their responses the following statements can be made regarding their perceptions of developmental kindergarten:

> **Findings 1: Principals believe the developmental kindergarten program was different than the regular kindergarten program and that there were certain advantages associated with the developmental kindergarten program.**

All principals commented on the lower student teacher ratio in developmental kindergarten and emphasized that this allowed for more individualized attention. Teachers were better able to structure for experiential learning activities and to increase the amount of communication and language within the classroom environment. The following examples are provided from principal protocols:

> **Principal 1:** A lot of hands on, a lot of whole language....big books, two teachers in the same room being able to give the kids more one-on-one.

> **Principal 2:** We do a lot more hands-on and use manipulatives and let them...learn and explore through their natural instincts, rather than an academic curriculum....also attention to the developmentally delayed child is a strength...they are not just a cog out of line for the regular kindergarten [program] like in the past.

> **Principal 3:** More communication between adults and children...a lot more hands-on, a lot more experiential programs...emphasis on language development... concepts learning.

> **Principal 4:** There is a lot more direct instruction...[a lot of these kids] are just real limited, they really lack in experience...most of the kids [in developmental kindergarten] have not used a pencil, crayon, scissors, those kinds of things...and we've been able to work in those areas..instead of just a center or something...a lot more socialization, a lot more language development...[in developmental kindergarten there is] enough structure, enough attention, enough reassurance...[it isn't a] competitive environment and in regular kindergarten ...kids do compare themselves.

Thus principals identify instructional advantages for students when the class size is small and the teacher(s) is (are) able to provide frequent individualized attention and monitoring of learning. Small class size with a focus on language acquisition and developmentally appropriate activities is seen as different than the regular Harrison kindergarten program.

> **Finding 2: Principals believe the developmental kindergarten program had a positive impact in their buildings.**

All principals reported that having the developmental kindergarten program in their building was a positive experience. One principal noted it created a good image for kindergarten, another emphasized it was a boost for the profession stating:

> **Principal 2:** A spin off for the building might be the encouragement and acknowledgement that looking at individual differences is important...a belief that as a profession, as a district, we are doing something that should be done.

Two principals noted that their whole kindergarten program had changed as a result of having developmental kindergarten in the building.

> **Principal 3:** The whole emphasis, the whole program has changed...the communication between the kindergarten teachers...how to reach those lower end kids, to give them the success that they need.

> **Principal 4:** It has increased and improved the instruction in all the other kindergarten sections...I see an incredible increase in language experience kinds of things, the amount of reading to kids, reading with kids, teaching through thematic units, tying that instruction together. And I think what spurred that on was the question: How do we need to design this program differently? And then teachers getting excited and doing a lot of cooperative planning, and that got carried over into the other [regular] program.

Thus, principals identified benefits for the building staff as well as for the students involved in the developmental kindergarten program. Those benefits most likely improved the quality of instruction for all kindergarten students within the buildings.

> **Finding 3: Principals recognize the difficulties of starting something new and the lack of a district philosophy of what this pilot program should look like.**

Although principals did not indicate any desire to have a structure for developmental kindergarten imposed upon them, they also noted a lack of coordination and communication about the program across the district. According to one principal there "wasn't much supervision...it was whatever the teachers and I felt like doing in our building" (Principal 1). Another principal noted the problems of getting started, of identifying kids and communicating with parents, and of the transience of the population. He stated, "We were told last year that this was an experimental program, first year of it and we are going to evaluate it and see how it works...and we just did not have direction on what we were looking for. The kids kept moving in and out of the program, and we wanted to hold on to some for test results and they were all gone. So I guess [there was] the fear that we would lose the program because of no way to show the growth and the value of the program" (Principal 3). Another principal noted that although there were potential problems just as there are when any new program is starting up these were lessened because of the quality of the staff in the program.

Principal 4: I think potentially what could have been a problem is that you are just experimenting, and you are kind of playing-by-ear a lot of these things and seeing where it is going. I think if we would not have used a real experienced Kindergarten teacher, who was willing to kind of roll with that, I think that could have been real frustrating and real difficult. That didn't turn out to be a real problem because she didn't make it a problem.

Based on these findings it would seem appropriate to develop some broad guidelines for the developmental kindergarten program, and to provide for opportunities for teachers in this program to meet on a regular basis for sharing of curriculum ideas and for program planning.

Finding 4: Principals believed the developmental kindergarten program helped avoid learning and behavior problems and resulted in both academic and social growth for the students.

All four principals agreed that the staffing pattern (two adults with fewer children) allowed for better supervision and teachers were able to modify inappropriate behavior before it became a major problem. In some cases this smaller class size also allowed teachers to work with parents to help them help their child at home, as well as providing for decreased frustration on the students part and an improved self-concept as they experienced success in learning.

In addition, principals were also able to identify both academic and social growth in the developmental kindergarten students they observed in the spring compared to those who entered school last fall. Principals noted growth in receptive vocabulary and language but referred the interviewer to test scores for objective documentation. One principal noted "they are writing their names and they can write numbers now... [and] just listen to them talk. [these kids came in] not speaking sentences and their train of thought was [poorly] structured, they just did not know a lot of words. Now they can complete whole sentences and they can describe things...they can communicate and they are not afraid to speak to adults and to their peers" (Principal 3). And another principal talked about the students' ability to use "language to process and come up with solutions" (Principal 4). Commenting on improved socialization one principal talked about the "interaction between the kids, their willingness to work together--rather than by themselves. They will ask for help, they will help each other in a classroom situation as well as [in] informal settings such as recess and things. They will play together and it is appropriate play" (Principal 3). One principal cited the following example as the biggest indicator of improved socialization: "...the [developmental kindergarten] teacher came in about a month or six weeks ago and said, 'I'm going crazy, 'cause of these kids--all they're doing is talking, they just talk all the time, all day!' Again, where that kind of stuff can drive you crazy, it's like, that was our goal, that is where we need to be! She and I just looked at each other and laughed because, I mean, it's like we have almost over-achieved. We are going nuts with these kids, but it is wonderful because what we had in the

beginning were real non-verbal kids. Kids that didn't talk in complete sentences, kids that didn't talk appropriately in terms of it wasn't contextual, it didn't make sense, it was just throwing out anything...I think the biggest indication is [the teacher] saying, 'Can I turn these kids off?!'" (Principal 4).

Thus, it appears from the principals' perspective that many of the goals of the developmental kindergarten program were met. Students were involved in a developmentally appropriate curriculum and the result was students who were successful in acquiring language skills, in developing appropriate learning behaviors, and in acquiring readiness skills for academic learning. As a spin off, the building, or at the very least the kindergarten teacher, benefited professionally from the implementation of the pilot developmental kindergarten program.

Findings from Teacher Interviews

Altogether, six teachers taught in the Developmental Kindergarten program. The programs at Stratton Meadows and Bricker were "team taught" by two certificated teachers. In the programs at Pikes Peak and Monterey, instruction was provided by one certificated teacher assisted by an instructional aide. When two teachers were involved in the instruction, more children were assigned to developmental kindergarten than when one teacher worked with an aide. This may be an important difference in terms of program design and delivery of services.

All six teachers were interviewed at their respective schools which housed the developmental kindergarten programs to identify their perceptions regarding the efficacy of the developmental kindergarten program. Findings from these interviews are summarized below. (It is important to note that one teacher taught in two different schools and was interviewed twice. Since she responded somewhat differently in each interview, both are included and referred to in this report.)

Finding 1: Although the developmental kindergarten programs looked somewhat different depending upon the building in which it was housed, there were also important similarities among the programs.

Of the four programs it appears that three were designed as integrative models, and the fourth appears to have been ability grouped. That is, three of the programs included "average" kindergarten students to serve as models for those who were identified as developmentally delayed and in need of the program. The teachers noted two major difficulties with this model: (1) in some instances the "average" kids modeled the inappropriate behaviors of the developmentally delayed kids (i.e. they were less attentive, crawled around on the floor, etc.), and (2) the pace of the instruction was slower that in a regular kindergarten and teachers worried that they were not challenging these "brighter" students appropriately and that instead these students were "losing out". (This issue of pacing should probably be further, and carefully, investigated as Levin (1987) has suggested we need to accelerate learning for disadvantaged students rather than slow it down.) The following statements exemplify this concern as the teachers expressed it:

Teacher 1: [In] many cases I do feel that the model group got short changed, they definitely were short changed. Our developmental kids have made good strides, but we really keyed everything to them....and I'm not feeling that some of the model kids show the kind of growth that normally I see this time of year. With me this is a real drawback.

Teacher 4: I would probably say that the child that should have been in a regular classroom, maybe their behavior regressed, [they] role modeled after the lower kids....I think the developmental kids need your attention and they are acting out a lot of times, and so the other kids start modeling.

In one program, the ability grouped model, this was not an issue because only kids identified as needing a developmental approach were placed in the program. Importantly, that teacher did not report any concerns regarding lack of appropriate role models.

There were some important similarities across all the programs and upon which the teachers commented. For example, teachers talked about the importance of low class size which allowed them to provide more individualized attention and monitoring. They expressed concerns with the students' lack of experiences, usually acquired during the first five years of life, that enhance education and they spoke of the use of manipulatives to provide "hands-on" opportunities for these children. In all four programs language was identified as a major component and was integrated into all aspects of the program. The teachers spoke of emphasizing cooperation and cooperative learning and of enhancing social interactions. One teacher, explaining the theory of developmental readiness stated, "You can't force learning and you can't bring them up to skill levels until they are ready. But you can be there, and you can enhance and you can provide the right instructional environment, the right materials, and you can take that learning a great deal further than just in a traditional classroom setting" (Teacher 2).

Thus, in general, teachers were able to identify what they considered to be important components of a developmental kindergarten program, even though the programs looked somewhat different in each of the four buildings. Further, teachers reported this program was different than "regular" kindergarten because of the staffing ratio and the emphasis on language and experiential learning, and the availability of (special education) monies to purchase special materials for use with these students.

Finding 2: Teachers believe there were many positive outcomes for students in the developmental kindergarten program.

When asked to identify strengths of the program teachers consistently talked about students outcomes in terms of academic learning and growth in both social and behavioral areas. For example, teachers stated:

Teacher 1: There has been some really incredible growth with using oral language and listening skills, attention skills, a lot of really, really positive things happened. A lot of growth really occurred with those kids.

Teacher 3: Most of the kids in our developmental class are language delayed...and in the beginning of the year it was hard to pull language out of them. Now they just talk all the time...the language just flows. That is, I think, the biggest growth I have seen in the kids.

Teacher 5: We have [really worked on] self esteem. We love them, we support them, we provide stability...until we can make them feel better about themselves, make them feel important, and help them to achieve some success, we are not going to do much in the way of academics with them....We also are able to lower their frustration level ...by not pushing a curriculum on them that they are not ready for....we are trying to make decision makers out of them, and [the kids] are beginning to think for themselves...also, our children here teach one another and they work together. ...I have seen a little girl get up from her table when she saw a child struggling with a paper and I was working with someone else, and she went over and sat next to that student and helped that student do that work....I am excited about that.

Teacher 6: I think...that we've created some verbal monsters....expressive language has improved tremendously.... and the other thing, probably the second most important factor, that is real hard to measure, is their self-confidence. I'm feeling that they're feeling real good about themselves, it's been a real positive experience for them, they feel pride in what they have learned and what they are able to do....they are trying more things than they would at the beginning of the [school] year.

In the developmental kindergarten program, regardless of the model used, the development of expressive and receptive language was a primary goal. It appears that for most students this goal was achieved, at least as measured by teacher observation. In addition, teachers observed positive outcomes in terms of learning behaviors (attending, listening, following directions) and readiness skills. Teachers identified strengths of the program both in terms of student outcomes (identified above) and program design (lower student-teacher ratio, more individualized instruction, more monitoring for success, more manipulatives and hands-on learning activities). If evaluated in these terms, the program was clearly a success.

Finding 3: Teachers identified major concerns with the program including organizational and communication problems, and lack of centralized leadership.

Since the programs were building based, each building team (principal, teacher, etc.) was free to develop the program as they believed appropriate within the framework provided. However, teachers perceived this as a lack of direction or coordination of the program and reported feeling frustrated and being unsure of what was happening, or of what was supposed to happen. The following comments exemplify this frustration on the teachers part:

> **Teacher 1:** We didn't feel there were any specific goals for the program, and if there were we did not see them. So that could be perhaps another problem in terms of communication. If those goals existed we didn't know about them.

> **Teacher 2:** I think probably this kind of program needs some real long term planning, and I would like to have seen six months to one year go into the planning before it was implemented. I would like to have seen a philosophy written down, I would like to have seen goals written down, and I would like to have been part of the team developing the curriculum. We just kind of flew by the seat of our pants, in a manner of speaking. It was just here and we did the best that we could with what we had....Also, there was no communication between the pilot teachers. We met one time in the fall, briefly, and I think that we were all expecting to be able to [get] together and share ideas: "Well, what are you doing?" "What's working for you?", that type of thing and it didn't happen. So, we lacked leadership and we lacked organization and I think our program, if we include those two things next year, and somehow improve the communication between the teachers, we could do a lot of better things with this program.

> **Teacher 3:** It was hard -team teaching was new [for me] and it was hard trying to teach developmentally when I wasn't sure what that was. We had some guidelines from the district, but, again, it was very general...Now I am going to turn that around and [make it] positive. I can see why they did that now. It is designed to be our program, they gave us a few guidelines to follow, which was good, because we can be creative and do what we thought was necessary at the time....I thought maybe we could have had just a little bit more communication.

> **Teacher 5:** I thought we should have taken some time to plan the program. Write down goals, write down curriculum, develop curriculum, gather materials, that kind of thing....there was no communication between the other people and the other pilots.

Based on these comments, it would seem appropriate to consider scheduling some regular meetings for purposes of program planning and development, communication, and curriculum sharing. Even though teachers appear to enjoy the freedom to plan and modify curriculum and instruction, they seem to want to know the parameters within which they must operate, as well as the district level expectations for the program.

In addition, one other major problem was noted by two teachers. Teacher 2 team taught developmental kindergarten with Teacher 1 in the morning and then traveled to another building to teach developmental kindergarten with an aide in the afternoon. This was a problem in terms of time for planning or communication. In the morning the teachers only had time prior to the start of school for planning, thus, Teacher 1 assumed most of the planning responsibilities. By the time Teacher 2 had traveled from one building to the other she had approximately 20 minutes before class started in which to (1) eat lunch (usually she skipped lunch), (2) rearrange the room (it was used in the morning by a different kindergarten teacher, and (3) share the "plan" for the day with her aide. It was often difficult to accomplish all of this in the twenty minutes prior to the students walking in the door!

Regardless of these identified concerns with the program teachers were optimistic that these problems could be easily solved and that the program had value. As one teacher noted, "I have nothing but good things to say. It has been one of the best years I have ever had. I love the program. I think it is great, so I can't really say anything negative about it" (Teacher 4).

Finding 4: Teachers have different expectations about what will happen to these kids next year.

Interestingly, there was no identifiable expectation about where kids would be performing or where they would be placed for the following academic year. This seemed to be a building based decision, and handled somewhat differently in each building. In one program all the children will go on to first grade but they may be grouped with a teacher who understands that they are at a different developmental level than most first graders. If this is done, that teacher will be provided a lower class load with the hopes that this will provide increased learning opportunities for these students. In another building some kids were identified as needing special education services and staffed for part of the day to a STAR program. Those students will go on to first grade. The teachers report that some will do fine and some will have problems, but the [first grade] teachers "are going to have to gear their program to accommodate the needs of the children that were in developmental" (Teacher 4). In another building it seems that all options were possible. That is, some students were going to pre-first classes, some to an "unclassified pre-first" (meaning if they made enough progress and were at an appropriate skill level at the end of pre-first they could go right into second grade), some to regular kindergarten, some to the Pre-academic Language Program (PAL; special education) and some into first grade. And in the fourth building all students were going into pre-first. The teacher stated, "They won't be 'held back' in any sense of the word. In other words, they are just going to pick up where they are leaving off and progress from there" (Teacher 6).

It is important to note that teachers saw the placement options as appropriate for their students. However, the retention literature suggests that placement in transition-level programs such as pre-first classrooms is less beneficial to students in terms of both academic and social-self-concept growth than promotion with age-appropriate peers (Holmes & Matthews, 1984; Leinhardt, 1980; Smith & Shepard, 1987).

Finding 5: Teachers perceived the developmental kindergarten program as a means for both developing alternative instructional strategies and as a means of sorting low end kids.

To varying degrees teachers saw this program as sorting out the low end kids for special kinds of instruction. That is, teachers reported that grouping within the classroom was sometimes necessary in order to be sure the brighter/quicker kids were not being held back but were, instead, being exposed to "regular kindergarten curriculum". Some stated a developmental curriculum would be "good for all kids" (Teacher 2) while others stated they had "mixed feelings about that" (Teacher 1) or that it would be "real repetitious and probably mundane and boring for the kids that are in the higher class" (Teacher 4) or that "[not all] kindergarten kids need it" (Teacher 6). Thus the issue of ability grouping (even though most kindergarten teachers would probably say they were grouping on the basis of needs rather than ability) seems to have emerged, at least to some degree, as a result of the developmental kindergarten program. However, the ability group literature suggests that "between-class ability grouping is of little value in enhancing student achievement" (Slavin, 1987, p. 293) and that "there is no support for the practice of assigning students to self-contained classes according to general ability or performance level....and [further that] there is good reason to avoid ability-grouped class assignment, which seems to have the greatest potential for negative social effects" (Slavin, 1987, p. 321). To this end, the degree to which the teachers viewed the program as a method of developing alternative instructional strategies must be carefully considered, as this would appear to be a desirable and beneficial outcome of the developmental kindergarten program.

In general, teachers reported that finding alternative instructional strategies was an important focus of the kindergarten program. The following statements illustrate this perspective:

> **Teacher 1:** For me the program [focus] has been to find alternative strategies...that has been real effective... using a lot of cooperation really seems to be effective, using a real highly, highly structured format at the beginning of the year, but not letting the kids know that. They really think that they have tremendous choice..when the kids go to, say perhaps, the math shelf and choose an activity from that shelf I know what they are going to get out of that activity. They don't need to know. They just need to know that they are having a lot of fun making choices. Using a lot of good language and communicating and a lot of interaction. I don't like the idea of having a sorting system for low-end kids. I am not comfortable in saying that a developmental program should just be for low-end kids. I think they need to have a model. If they can see other kids doing that then they are able to copy that behavior, and to internalize it.

> **Teacher 2:** I think children learn from one another...They teach each other different things. Each group of kids bring different things to the group. The low-end kids may teach kindness and sharing and that kind of thing. The high-end kids might get somebody else to think about an idea in a different way, or give them that spark to get them thinking in the first place.

Teacher 6: We need to do both...we need to recognize [these kids] and we need to do something to assist with their programming. You just can't say these are low kids, we'll do what we can and let it go at that. I think you have to do as much as you can for them. And that means doing some extra programming.

So, it appears that teacher saw advantages to grouping, but held themselves professionally responsible to develop alternative instructional strategies and to provide for different styles of learning. To that degree, these students experienced success in their first year of school.

Summary

In conclusion, principals and teachers believe that the developmental kindergarten program is worthwhile and successful, test scores indicate that kids are benefiting from the program and there is strong evidence that this program has an impact on the development of participating students and on the school in general.

Because the program appears to be successful we feel it should be continued with the following recommendations addressing areas of concern:

- Communicate the already established "Descriptors of a Developmental Kindergarten Program" to principals and teachers (see Appendix D).
- Identify a coordinator to establish a system for planning and evaluation and to provide guidance.
- Continue collecting data to identify program success.
- Provide opportunities for staff in the developmental kindergarten program to meet on a regular basis for curriculum planning and sharing of ideas.

APPENDIX A:

Newsweek

April 17, 1989

Special Report: How Kids Learn

pp. 50-57

BRIGANCE TEST SCORE COMPARISONS

Developmental Kindergarten

	Ethnic Code	1988	1989	Gain
DK-1	3	66.0	97.0	+ 31.0
DK-2	4	65.0	87.0	+ 22.0
DK-3	5	38.0	83.5	+ 45.5
DK-4	4	64.5	84.5	+ 20.0
DK-5	4	56.5	95.0	+ 38.5
DK-6	5	58.0	85.0	+ 27.0
DK-7	3	62.0	96.0	+ 34.0
DK-8	4	64.5	97.5	+ 33.0
DK-9	3	63.0	95.5	+ 32.5
DK-10	5	42.0	95.5	+ 53.5
DK-11	4	61.0	99.5	+ 38.5
DK-12	5	85.5	99.0	+ 13.5
DK-13	5	70.5	95.5	+ 25.0
DK-14	4	64.5	69.0	+ 4.5
DK-15	4	80.0	96.0	+ 16.0

Average Gain = 29.0

Control Group

	Ethnic Code	1988	1989	Gain
C-1	3	65.0	96.0	+ 31.0
C-2	4	72.0	84.0	+ 12.0
C-3	5	47.0	71.0	+ 24.0
C-4	4	68.0	87.0	+ 19.0
C-5	4	54.5	87.5	+ 33.0
C-6	5	62.5	89.5	+ 27.0
C-7	3	60.5	87.5	+ 27.0
C-8	4	63.0	90.0	+ 27.0
C-9	3	62.5	100.0	+ 37.5
C-10	5	45.5	93.0	+ 47.5
C-11	4	59.0	86.0	+ 27.0
C-12	5	85.5	100.0	+ 14.5
C-13	5	67.0	90.0	+ 23.0
C-14	4	58.0	88.0	+ 30.0
C-15	4	81.5	99.0	+ 17.5

Average Gain = 26.0

Ethnic Codes
1 - American Indian
2 - Asian
3 - Black
4 - Hispanic
5 - Other

10

INTERVIEW QUESTIONS

Principals:

1. How is the developmental kindergarten program different form the regular kindergarten program?

2. What do you see as the strengths of the developmental kindergarten program?

3. What positive things do you think happened in your building as a result of the developmental kindergarten program?

4. What problems did you run into as a result of the developmental kindergarten program?

5. Do you think the developmental kindergarten program headed off any learning or behavioral problems with these kids?

6. What evidence did you see of academic growth of these kids?

7. What evidence did you see of socialization for these kids?

Teachers:

1. Would you please tell me about your developmental kindergarten program, the curriculum, instruction, etc.?

2. Tell me how that was different from your regular kindergarten program.

3. Do you think what happened in the developmental kindergarten class would be good for all kindergarten kids? Why or why not?

4. What positive things do you think happened in your building as a result of the developmental kindergarten program?

5. What problems did you run into as a result of the developmental kindergarten program?

6. What is going to happen next year to our developmental kindergarten kids?

7. How would you structure the program differently next year?

8. How should we select kids and how can we do that quickly?

9. One of the goals of the developmental kindergarten program was a socialization goal for handicapped kids. Tell me about how that worked.

10. Do you see the developmental kindergarten program as a way of developing alternate instructional strategies or a sorting system for low-end kids or both?

"DEVELOPMENTAL" KINDERGARTEN

DESCRIPTORS

GENERAL DESCRIPTION

A. **Emphasizes Language Development**

1. **Listening/Speaking** - A heavy base in these before we proceed to link reading and writing.

   Ready Steps - Peabody Language Development
   Riverside Oral Language Transition
   Materials that integrate other learning with language, such as Explorations for math or McGraw Hill Kindergarten Social Studies program.

2. **Reading and writing** are taught on whole language model
   big books (Wright, Rigby, etc.).
   Shared Books
   Guided Reading
   Experience Stories - Group and individual.
   Children progress developmentally through the writing process.
   Skills lifted from reading materials.

3. **Children** are questioned by teacher through the day about their activities, plans, rationales to enable them to verbally explain, sequence, etc., predict classify, draw conclusions. Teacher also demonstrates language use by labeling using prepositions, explaining causal relationships, etc.

B. **Emphasizes Concrete Experiences**

Field Trips, experiments, etc. to gain an experience base.
Math is at a concrete, manipulative level: Sorting naming, counting, classification.

Example materials:

Math Their Way
DMP Math

Interactive types of toys and materials (doll house, dress-up, Fisher Price, etc. Materials rather than toys that only "perform" or do one thing.
There is an emphasis on teaching through all the senses and on pairing sensory and motor experiences.

C. **Develops Gross Motor and Fine Motor Skills**

Careful program for motor development, perhaps in consultation with occupational therapist and adaptive PE teacher. Don't force handwriting, especially between lines; develop muscle control first with manipulatives such as beads, lacing, etc. Independent self-help skills are an important part of motor development. Motor experiences need to be paired with language.

D. **Emphasizes Development of Self-Esteem as a Learner**

<u>Success-based</u> experiences, creative dramatics and role-playing are appropriate.

E. **Uses Developmentally Appropriate Classroom Management and Organization**

Positive reinforcement.
Clear and simple consequences.
Clear one- and two-step directions.
Clear expectations for completion of one task at a time.
Short work periods and listening periods.
Structuring of physical environment for different types of expectations.
Morning snack.
Limited large-group presentation rather than large-group objectives, individual and small-group objectives are developed on a modified "I.E.P." plan. This points to a continuous progress system.
Many interest centers.
More physical activity and talking going on than in structured non-developmental selling.
Children are allowed to plan at least some portion of their day.

"DEVELOPMENTAL" KINDERGARTEN

SPECIFIC DESCRIPTORS

A. Arranging and Equipping the Classroom

1. Room is divided into several distinct areas of interest centers (house, art, block, quiet, construction, sand and water, music and movement, animal and plant).

   - Boundaries are well defined by low shelves, stable screens, or walls with openings so that children and adults can see into areas.

   - Each area has an adequate amount of space for children and their use of materials.

   - The art area is near the sink.

   - Tables are incorporated into the work areas.

   - Work areas are not cluttered with unnecessary furniture or materials.

   - Traffic flow permits children to work without interruption.

   - The house and block areas are near each other for interrelated play.

   - The noisier areas are not close to the quieter areas.

   - Some work areas are set up outside in warm seasons.

2. Materials are stored in the area where they are used.

   - Shelves, drawers, and containers are labeled with objects, pictures, photographs or outlines of the contents.

   - Identical and similar items are stored together.

   - Sets of materials in different sizes are hung or stored so that size differences are apparent.

   - Materials within each area are easily accessible to children.

   - All materials within children's sight and reach can be used by children.

Arranging and Equipping the Classroom - Continued

3. There is an adequate amount and variety of materials in each area.

   - There are unstructured materials in each area that can be used in many ways. Example: Poker chips can be used for counting, stacking, matching, sorting, representing food, money.

   - There are a variety of materials available to children to achieve their goals. Examples: Papers can be put together with glue, paste, tape, stapler, paper clips, string, rubber bands; a house can be made with blocks, paper, wood at workbench, playdough, paint.

   - There are enough materials in each area for children to work simultaneously.

   - There are materials which can be used for pretending or making representations in each area.

   - There are many real things (like plants, animals, real utensils, tools and instruments) which children an explore in each area.

   - There are culturally relevant materials in each area.

4. Space is provided for displaying and storing children's work and belongings.

   - Display spaces are at child's eye level as much as possible.

   - Display space is provided for children's work in each area.

   - Individual storage (dishtubs, empty gallon containers, boxes, baskets) and coat space is provided for each child to store his or her personal belongings. These storage spaces are labeled and placed low enough so that children can use them independently.

5. Each adult familiarizes children with names and content areas.

6. Equipment is changed or added throughout the year.

   - Children help decide where new materials should go.

   - Children help make labels for new equipment.

   - Adults talk with children about room arrangement changes.

Arranging and Equipping the Classroom - Continued

7. The block area includes an ample supply of the following kinds of materials:

   - Building materials.
   - Take-apart-put-together materials.
   - Materials for filing and emptying.
   - Materials for pretending.

8. Riding toys, a workbench, a sand table, table and chairs are **not** included in the block area.

9. The house area includes an ample supply of the following materials:

   - Kitchen equipment for manipulating, sorting, filing, emptying.
   - Materials for dramatic play.
   - Materials for real cooking activities (used under adult supervision)>

10. There is a workable clothes storage system in the house area.

11. A section of the house area is undefined, allowing for other kinds of role play.

12. The art area includes an ample supply of the following kinds of materials:

    - Paper of different sizes, textures, colors.
    - Materials for mixing and painting.
    - Materials for holding things together and taking them apart.
    - Materials for making three-dimensional representations.
    - Materials for making two-dimensional representations.

Arranging and Equipping the Classroom - Continued

13. The art area also includes:

    - A variety of work surfaces.

    - Workable smock storage.

    - A place for drying pictures.

    - A place for storing projects in progress.

14. Adult introduce art area materials gradually.

15. Adults keep the supply of expendable art area materials constant.

16. The quiet area includes an ample supply of the following kinds of materials:

    - Materials to sort and build with.

    - Materials to order and build with.

    - Materials to fit together and take apart.

    - Materials for decoding and pretending.

    - Books.

17. Books are stored in forward-facing racks and changed periodically.

18. The construction area includes the following:

    - A sturdy work surface.

    - Tool and wood storage.

    - Tools.

    - Wood, cardboard, styrofoam, etc.

19. The music and movement area includes the following:

    - Space for movement.

    - Labeled instruments.

    - A simple record player and/or tape cassette.

    - Records and/or tapes.

    - Instruments

Arranging and Equipping the Classroom - Continued

20. The sand and water area includes the following:

- An appropriate sand/water vessel.
- A cleanable floor surface.
- Materials for pretending, scooping and digging, filing and emptying.
- Additional sand-like materials for variety (i.e. beans, styrofoam bits, etc.).

21 The sand and water area is located near water and is moved outside when possible.

22. The animal and plant area includes the following:

- Friendly animals.
- Easily cared-for plants.
- Appropriate cages and food.

23. The outdoor area includes an ample supply of the following kinds of materials:

- Things to climb and balance on.
- Things to swing on.
- Things to slide on.
- Things to get into and under.
- Things to jump on and over.
- Things to push, pull, an ride on.
- Things to kick, throw, and aim for.
- Things for sand and water play.
- Things to build with.

24. The room arrangement accommodates children with handicaps.

- Materials are maintained in consistent locations.
- Room arrangement changes are made gradually and visually-impaired children are acquainted with them as soon as they occur.

Arranging and Equipping the Classroom - Continued

- Consistent traffic patterns are maintained.
- Rugs are anchored firmly to the floor.
- Work surfaces are located within children's reach.
- Special physical arrangements are devised and maintained for individual children based on their particular needs.
- Materials are labeled with real objects.
- Each area includes developmentally appropriate materials.
- Room arrangement changes are made gradually, and children are helped to anticipate and take part in them.

B. Establishing a Daily Routing

General

1. Routine is consistent from day to day; children know what to expect.]
2. The planning time/work time/clean-up time sequences is maintained.
3. Each time period has a definite name which children are helped to learn.
4. Verbal or non-verbal signals are used to mark the end of time periods.

Planning Time

1. At the beginning of the year, adults help children get ready to start the planning process by helping them:
   - Learn what materials and equipment are available.
   - Learn the names of the work areas.
   - Learn the names of other people.
   - Begin to make choices.
2. - Planning occurs each day at the same time and in the same place.
3. Children can see the areas of the room from where they plan.

Establishing a Daily Routine - Continued

4. Each adult points out things to the children in her group which may be helpful during planning, such as new materials or special activities the children might like to plan for if any are to occur that day.

5. Each adult talks individually with each child in turn:

   - Asking the child what her or she would like to do.

   - Giving the child time to respond.

   - Acknowledging the choice or plan the child makes.

   - Helping the child expand his or her plan.

   - Giving suggestions if the child can't think of anything.

   - Reminding the child of something he or she began yesterday if such is the case.

6. Depending on the needs of the child, adults help children.

   - Vary their plans from day to day.

   - Make a series of connected plans.

   - Make realistic plans.

7. Each child indicates what he is going to do during work time either by:

   - Naming an area, object, or child he's going to work with.

   - Describing what he's going to do.

   - Describing how he's going to do something.

   - Drawing or tracing what he's going to do.

   - Dictating or writing what he's going to do.

8. Children go to the area where they have planned to work as soon as they have talked with an adult about their plan.

9. Adults watch to see which children need assistance to get started on their plans.

Establishing a Daily Routine - Continued

10. Each adult helps children who need assistance as soon as every child int he small group has made a plan.

11. Each adult records or in some way keeps track of children's plans.

Worktime

1. Each child is actively involved with the materials he or she has chosen.

2. Children get their own materials.

3. Each child works on his or her plan.

4. Children converse intermittently with adults or other children about what they are doing.

5. Each child attempts to solve problems he or she encounters or seeks the assistance of an adult.

6. Children clean up their own materials when they're finished with them unless another child is using them.

7. Each child makes a new plan with an adult if he or she has finished his initial plan.

8. Adults try to keep in mind what's happening in the whole room as they move from child to child throughout work time.

9. Adults assist children who:

   - Need help getting started on their plans.

   - Ask for help as they are working.

   - Ask for help as they are working.

   - Don't seem to know what to do next.

   - Are making new plans.

10. Adults work with each child on his or her own level.

11. Adults talk with children about what they are doing.

Establishing a Daily Routine - Continued

12. Adults recognize and support children's work by doing one or more of the following:

    - Describing what a child seems to be doing.
    - Asking a child to tell what he or she is doing.
    - Allowing the child to try out his or her ideas.
    - Helping children gather materials for their ideas.
    - Having a child show another child what he or she is doing.

13. Adults help children extend their plans and ideas by doing one or more of the following:

    - Helping children find additional materials.
    - Asking children open questions to help them see what they could do next with their plans.
    - Helping children relate heir work to someone else's.
    - Helping children save or represent what they have done.
    - Planning experiences and/or field trips relating to children's work time pursuits.
    - Helping each child to extend his or her plan along the child's own interests and at the child's own pace.
    - Taking cues from children about when their plans are complete.

14. Adults helping children deal with work time conflicts by doing one or more of the following:

    - Helping a grabbing child identify an alternative object to use.
    - Having the grabbing child talk to the child with the desired object.
    - Helping children share by using a simple timing device.
    - Purchasing more than one of particularly desired objects when feasible.
    - Helping children solve their own space problems.

- Offering a choice of solutions to problems if children can't think of their own solutions.

- Helping a frustrated child stop disturbing other's work, then going back to his plan to see what the real problem is.

- Helping children find alternative modes of behavior and plan more suitable activities for themselves, rather than stressing their "naughtiness" with them.

- Anticipating possible conflicts by helping children before they get into trouble.

15. Adults encourage children to clean up throughout work time as they finish one plan and before they begin a new one.

Clean-up Time

1. Children do most of clean-up work and return materials to the proper places.

2. Adults remind children about clean-up toward the end of work time and then use a consistent signal to mark the beginning of clean-up time.

3. Adults alert children to the reasons for cleaning up.

4. Adults help children define what materials they're going to put away.

5. Adults talk with children about the kinds of things they're putting away.

6. Each adult works along with the children at clean-up time.

7. Each adult uses clean-up time to implement the key experiences.

8. Adults make up clean-up games based on what the children are doing and what they enjoy.

9. Adults designate a place where children gather as they finish cleaning up.

10. Adults call group meetings to assess the progress and problems of clean-up on difficult days.

11. Adults give a child having difficulty cleaning up a choice to tasks, then leave him or her to finish the task chosen.

Recall Time

1. Adults recall with children they planned with.

2. Children talk about their work time efforts.

3. Adults describe what a child did at work time or ask other children to, if the child can't do so himself.

4. Adults listen and support children as they recall.

5. Adults experiment with a variety of ways of recalling to make recall time interesting to children.

Small-group Time

1. Small groups:

   - Include a cross section of the classroom population except in classrooms in which there is a very wide range of developmental levels.

   - Separate children who need a chance to work independently.

   - Are maintained long enough for children and adults to get to know one another.

   - Meet in locations suited to the activity rather than always at a table.

   - Are formed around each adult in the classroom (two groups if there are two adults, three groups if there are three adults, etc.)

2. Small groups of children (one group for each adult) are actively involved in a planned activity.

3. Each child works with his or her own set of materials.

4. Each child has enough space to work comfortably.

5. Each child makes discoveries on his or her own.

6. Each child talks with the adult and the other children about what he or she is doing.

Establishing a Daily Routine - Continued

7. Each child observes and responds to what others are doing.

8. Each child helps to clean up at the end of the activity.

9. Adults have materials ready and accessible.

10. Adults begin the activity by giving the whole group an idea about what they try with the materials.

11. Adults move from child to child to see what each child is doing, and to talk with him or her about it.

12. Adults support and work with individual approaches to the task.

13. Adults suggest ideas to children having difficulty starting.

14. Adults ask open questions to help children see new possibilities.

15. Adults respond to and acknowledge children's ideas and suggestions.

16. Adults encourage children to share ideas with each other.

17. Adults use materials themselves to imitate and model ideas.

18. Adults bring small-group time to a meaningful conclusion by helping children think about and use what they've discovered.

19. Adults try some of the following strategies when a child causes problems at small-group time:

    - Help the child anticipate small-group time and where his or her group will meet.

    - Include materials and/or activities the child is interested in or successful with.

    - Structure the activity so that the child can have success.

    - Include a friend in the child's group with whom he or she works well.

    - Enlist the child to help other children.

    - Help the child get started.

- Help the child find alternatives when his or her ideas don't work.
- Support the child throughout work time so that he or she comes to small-group time in a positive frame of mind.
- Help the child understand the limits and expectations at small-group time.

Outside Time

1. Adults and children are involved in play.
2. Each child is physically active - running, walking, climbing, pushing, pulling, swinging.
3. Each child is using large motor equipment or is playing an active game.
4. Adults participate actively with children.
5. Adults talk with children about what they're doing.
6. Adults help children solve problems, find alternatives.
7. Adults encourage, support, and extend children's play.
8. Adults both initiate and join games.
9. Adults structure indoor games and activities in inclement weather.

Circle Time/Large-group Time

1. There is enough space for everyone to move and sit down together.
2. Each child participates actively in the group game, song, dance, story, or planning for a special event.
3. Each child contributes his or her ideas to the activity at appropriate times, and occasionally serves as group leader.
4. Each child knows limits and expectations for circle time.
5. Adults know the plan for circle time, the words tot he song, how the game is played, etc.

Establishing a Daily Routine - Continued

6. Adults either lead or participate in the group activity, or help children finish the previous activity and then join in.

7. Adults ask children for their suggestions for the activity.

8. Adults have alternative activities in mind and can change to a favorite activity when the planned activity fails for some reason.

9. Adults try to relate circle time activities to things children have been doing.

10. Adults use circle time to implement key experiences.

Transitions

1. The daily routine has a minimum of major transitions.

2. Active times alternate with quieter times.

3. Meeting places are designated for major transition times.

4. Children make up ways of moving from one place or activity to the next.

5. Activities begin right away without long initial waiting periods.

C. Active Leaning

1. Adults help children explore actively with all the senses by:

   - Providing materials that encourage active exploration.

   - Encouraging exploration.

   - Planning active small-group times.

   - Exploring actively outside the classroom.

2. Adults help children discover relations through direct experience by:

   - Encouraging children to do things on their own.

   - Helping children think of alternatives rather than problem-solving for them.

Active Leaning - Continued

3. Adults help children use materials actively by:

   - providing materials children can manipulate, transform and combine.

   - Planning activities in which children can manipulate, combine, and transform materials.

   - Supporting and extending children's use of materials.

   - Talking to children about what they are doing.

4. Adults help children choose materials, activities, and purposes by:

   - Providing a consistent daily routine.

   - Helping children learn the arrangement of the room.

   - Helping children learn where materials belong.

   - Helping children work imaginatively with materials.

   - Helping children recognize that they've made choices.

   - Providing opportunities for choosing even in "structured" small-group activities.

5. Adults help children acquire skills with tools and equipment by:

   - Setting up a construction area.

   - Supporting children's use of tools and equipment.

   - Making a list of tools and equipment and keeping track of each child's progress.

6. Adults help children use their large muscles by:

   - Supporting each child at his or her own level of coordination and muscular development.

   - Including physical therapy for children with special needs.

   - Providing equipment on which children can exercise their large muscles.

   - Providing space and time in the daily routine for children to be involved in vigorous indoor and outdoor activities.

Active Learning - Continued

7. Adults help children take care of their own needs by:

   - Providing time for children to do things for themselves.

   - Making self-help a part of every activity.

   - Planning activities which require children to do things for themselves.

D. Language

1. The classroom is arranged and equipped to facilitate language.

   - Work areas are distinct with enough space for children to move freely and interact positively with each other. They are not cluttered with desks and tables.

   - Boundaries for areas are low enough for children to see over.

   - An adequate supply of materials that can be used in a number of ways and which encourage children to work and talk together are available in each work area.

   - Materials are displayed at child's eye level and available for children's use.

   - Children's work and photographs of children are displayed at child's eye level.

2. Adults capitalize on the opportunities for communication among children provided by the plan-do-review sequence.

3. Adults encourage interaction and cooperation among children.

4. Adults refer one child's questions or problems to another.

5. Adults interpret and deliver messages.

6. Adults fill in the context for children's out-of-context statements.

7. Adults encourage active listening.

Language - Continued

8. Adults show that they are available for conversation by:

   - Speaking in a natural voice.
   - Assuming the child's physical level.
   - Listening to what the child says.
   - Making physical contact with the child.
   - Remembering each child's particular interests.

9. Adults acknowledge and respect the child's role in conversations by:

   - Listening.
   - Acknowledging a child's ideas.
   - Focusing on what the child says rather than on his or her grammar.
   - Sticking to the subject.

10. Adults maintain a balance between child and adult talk throughout the day.

11. Adults converse with children who do not talk.

12. Adults establish non-verbal contact with children whose language they do not yet speak.

13. Adults direct children's attention to objects, events, and relations.

14. Adults ask open questions to help children describe objects, events, and relations.

15. Adults encourage children to describe things by having them try to answer their own questions.

16. Adults provide opportunities for children to describe what they are going to do, what they are doing, what they have done, and what's going to happen next throughout the year.

17. Adults make up and play describing games with children.

18. Adults speak precisely, describing objects, events, and relations in conversations with children.

19. Adults read stories to children.

20. Adults are aware of the role of descriptive language in the relationship areas.

21. Adults help children handle their feelings.

    - Adults talk matter-of-factly with children when they bring up questions and concerns.

    - Adults recognize and verbally acknowledge children's feelings.

    - Adults express their own feelings in words.

    - Adults help children find alternatives when conflicts arise.

    - Adults help children anticipate and avoid conflicts.

    - Adults help children find alternatives to verbal abuse and whining.

    - Adults encourage children to think about other people's feelings.

22. Adults take dictation from children whenever possible throughout the day.

23. Adults collect dictations.

24. Adults respond to individual children's interest in letters, sounds, and words.

25. Adults provide a wide variety of books for children to look at and read.

26. Adults read books, stories, and poems to children.

27. Adults tell stories and recite, poems, rhymes, and verses.

28. Adults sing with children.

29. Adults make up chants, rhythms and limericks with children.

30. Adults make up stories and songs with children.

E. Experiencing and Representing

1. The classroom is equipped with a variety of materials children can use to make representations:

   - Real objects and tools.
   - Materials to taste.
   - Materials to smell.
   - Materials to listen to.
   - Materials to touch.
   - Materials for making imprints.
   - Models, pictures, and photographs of real places and things.
   - Photographs of field trips.
   - Photographs of children working and of things they have made.
   - Props and materials for role play.
   - Outdoor equipment for role play.
   - Materials for making paintings and drawings.
   - Picture books, story books, catalogs, magazines.
   - Book-making materials.

2. The classroom is arranged to allow children to represent freely.

   - The classroom is divided into distinct work areas including an art area, house area, block area, quiet area, construction area, music area, and sand and water area.
   - Materials are easy for children to locate, use and return on their own.
   - Expendable art and woodworking materials are replenished frequently.

Experiencing and Representing - Continued

3. Children are free to generate their own representations of things.

   - Children choose their own materials for making representations.

   - Children construct representations from their own perceptions of things rather than from a pre-made adult model.

4. Opportunities for representation occur throughout the day at:

   - Planning time.

   - Work time.

   - Recall time.

   - Small-group time.

   - Outside time.

   - Circle/large-group time.

5. Adults encourage and support children's representational activities by:

   - Playing sensory-cue games.

   - Helping children notice and make imprints and shadows.

   - Encouraging children to imitate actions and sounds.

   - Comparing models to the objects they represent.

   - Encouraging and supporting children in their role play.

   - Helping children acquire skill with tools and equipment.

   - Helping children learn to prepare and use materials on their own.

   - Helping children plan and complete models of their own design.

   - Encouraging children to represent in a variety of two- and three-dimensional media.

   - Talking with children about their representations.

Experiencing and Representing - Continued

- Taking dictation from children about what they have made, done, seen, or experienced.

- Encouraging children to make their own books, songs, and stories.

- Providing real experiences directly related to things children are attempting to represent.

- Providing opportunities for children to interpret other people's representations.

- Following up real experiences with opportunities to represent the experiences.

F. Classification

1. The classroom is equipped with a variety of materials children can classify:

   - Real materials children can investigate and describe including tools, utensils, musical instruments, foods, living things, simple mechanical objects, things collected outdoors and on field trips.

   - Sets of identical materials.

   - Sets of similar materials.

   - Sets of materials that can be sorted in several different ways.

2. The classroom is arranged to give children opportunities to classify as they locate and return equipment and materials.

   - Identical and similar materials are stored together in appropriate work areas.

   - Some classroom materials are labeled using "not" labels.

   - Some classroom materials are labeled in terms of two attributes.

3. Adults provide materials and opportunities for children to classify throughout the day:

   - At planning time.

   - At work time.

Classification - Continued

- At clean-up time.
- At recall time.
- At outside time.
- At circle/large-group time.
- On field trips.
- At meal and snack times.
- At transition times.
- At small-group time.

4. Adults support and encourage children as they classify materials by:

- Talking with children, questioning them and taking dictation about things they are classifying.
- Accepting the labels for things children generate.
- Talking with children, questioning them and taking dictation about similarities and differences.
- Talking with children, questioning them and taking dictation about the multiple attributes of things.
- Using "not" statements as they talk with and question children.
- Making observations and asking questions about the dual attributes of things.
- Using "some" and "all" in conversations with children.

G. Seriation

1. The classroom is equipped with materials children can seriate:

- Materials children can easily compare.
- Materials that come in three or four sizes.
- Ordered sets of materials that fit together.

Seriation - Continued

2. Adults support and encourage children as they seriate by:

   - Asking questions that help children make comparisons.
   - Playing games that call for comparisons.
   - Taking dictation about comparisons.
   - Talking with children and asking them questions about size relationships.
   - Using materials in three or four sizes at small-group time.
   - Encouraging children to order things by size at clean-up time.
   - Reading and encouraging children to represent stories that deal with size relationships.
   - Encouraging children to fit ordered sets together at clean-up time.
   - Talking with children about what they are doing as they fit ordered sets of objects together.
   - Including ordered sets of objects in small-group activities.

H. Number

1. The classroom is equipped with materials children can count:

   - Continuous materials.
   - Discontinuous materials.
   - Materials that fit together in on-to-one correspondence.
   - Sets of countable objects.

2. Adults support and encourage children as they work with number concepts by:

   - Asking children questions about amounts of things they are using throughout the day.
   - Encouraging children to rearrange materials they are comparing.

Number - Continued

- Encouraging children to compare amounts of things they see in pictures.
- Talking with children about what they are doing as they put things together in one-to-one correspondence.
- Encouraging children to generate their own sets of materials in one-to-one correspondence.
- Encouraging children to pass things out at snack and meal times.
- Encouraging children to pass things out at snack and meal times.
- Playing games that include one-to-one correspondence.
- Encouraging children to count objects they are using.
- Accepting children's numerical ordering.
- Helping children who are interested to represent numbers in a way they can understand.

I. Spatial Relations

1. Materials are provided in each work area which permit children to explore and describe spatial relations.

- Materials which can be taken apart and put together.
- Materials from which children can make their own fit-together-take-apart toys.
- Simpler materials for children who can't yet fit together or take apart more complicated things.
- A variety of surfaces on, around, and in which materials can be rearranged and reshaped.
- Materials and equipment from which children can look at things from different spatial viewpoints.
- Photographs of familiar things and places from different spatial viewpoints.
- Materials that encourage children to explore positions, directions, and distances.

Spatial Relations - Continued

- Photographs of children in various positions.
- Materials that help a child learn how his or her body is put together.
- Materials with which children can represent people.
- Planning boards in each work area.
- A wide variety of pictorial materials.
- A wide variety of materials with distinguishable shapes.

2. The classroom is arranged and equipped so that children can easily learn to locate things within it.
   - The room is divided into several distinct work areas.
   - There are a limited amount of materials in each work area at the beginning of the year.
   - Adults provide display space for children's pictures and photographs in each work area.
3. Adults provide opportunities throughout the day for children to explore and describe spatial concepts:
   - At planning time.
   - At clean-up time.
   - At recall time.
   - At snack and meal times.
   - At outside time.
   - At circle/large-group time.
   - On field trips.
4. Adults encourage and support children's spatial learning as they work with materials and equipment throughout the day by:
   - Encouraging children to show and talk about new materials which fit together and come apart.
   - Making observations and providing suggestions about how things fit together and come apart.

Spatial Relations - Continued

- Encouraging children to show and talk about how they are rearranging and reshaping things.
- Describing changes for children who can't do so themselves.
- Encouraging children to rearrange and reshape things in a variety of ways.
- Providing a series of models or picture recipes of more complex transformations.
- Encouraging children to assume various physical positions in order to look at and describe things from various spatial viewpoints.
- Encouraging children to represent things from different spatial viewpoints.
- Encouraging children to describe the spatial positions, directions, and distances they are experiencing.
- Using specific spatial terms in conversations with children.
- Accepting children's judgments of positions, directions, and distances.
- Encouraging children to interpret spatial relations they see in pictures.
- Providing opportunities for children to use their bodies in a variety of ways.
- Helping children learn body part names.
- Helping children begin to notice and feel good about how their bodies are similar to other people's and how they are unique.
- Using the names of the work areas and the materials in them.
- Encouraging children to compare people, objects, or scenes, with pictures or photographs of the same people, objects or scenes.
- Encouraging children to recreate the spatial relations they see in pictures and photographs.
- Encouraging children to make their own shapes.

Spatial Relations

- Talking with children about shapes they are using and making.
- Encouraging children to make observations about the properties of different shapes they are using.
- Refraining from asking "What shape is this?" under most circumstances.

J. Time

1. The classroom includes materials that allow children to experience time units and time sequences:
   - Materials children can use to signal the beginning and ending of time periods.
   - Materials that move or can be moved or played at different rates.
   - Clocks and improvised calendars.
   - Charts depicting the order o events.
   - Living things that change over time.
2. Adults signal the beginning and end of time periods within the daily routine.
3. Adults play stop-and-start games at outside and circle/ large-group times.
4. Adults make up simple games that use times to signal stopping and starting times.
5. Adults provide opportunities for children to experience different rates of physical movement.
6. Adults encourage children to describe the various rates of movement they are experiencing and observing.
7. Adults establish and follow consistent daily routines.
8. Adults relate the length of time periods to actual actions or events.
9. Adults help children see that sand timers fo different sizes take different lengths of time to empty.
10. Adults accept children's judgments about the length of time periods and ask them to explain their reasoning.

Time - Continued

11. Adults use seasonal changes as opportunities to help children understand time by:

    - Talking with children about seasonal changes in everyday conversation.

    - Focusing on seasonal changes that occur locally.

    - Encouraging children to collect and talk about objects that are the result of seasonal changes.

    - Repeating walks and field trips at different seasons throughout the year and recording them with photographs.

12. Adults help children observe longer time intervals by watching plants and animals grow.

13. Adults use conventional times and dates in conversations with children.

14. Adults use clocks and improvised calendars to help answer children's "how-long-until" questions.

15. Adults help children construct their own personal calendars in appropriate situations.

16. Adults help children anticipate and prepare for time periods within the daily routine, for immediate processes they're about to begin, problems they may encounter, and for schedule changes.

17. Adults include children in plans and preparations for new pets.

18. Adults help children plan and complete what they've planned.

19. Adults help children describe and represent past events.

20. Adults use conventional time units in everyday conversations with children.

21. Adults use precise time units in conversation with children.

22. Adults accept children's attempt to use conventional time units in their own conversations.

23. Adults ask children to describe the order of events they've recently experienced.

Time - Continued

24. Adults depict the order of events with children.

25. Adults encourage children to make their own representations of the order of things.

26. Adults plan small-group times around activities that must be done in a particular sequence.